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10/825,686	04/15/2004	Heikki Olavi Haapiainen	2006978-0018	8865
7590 06/09/2008 CHOATE, HALL & STEWART LLP Patent Department Two International Place Boston, MA 02110			EXAMINER SPAHN, GAY	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/825,686

**Applicant(s)**

HAAPAINEN, HEIKKI OLAVI

**Examiner**

Gay Ann Spahn

**Art Unit**

3635

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 4/15/2004, 1/11/2008 and 3/3/2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 9 and 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 June 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date See Continuation Sheet
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :28 June 2004, 09 August 2004, 07 September 2004, and 19 November 2004.

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election without traverse of GROUP I (i.e., claims 1-26), SPECIES I (i.e., Fig. 1) of the FIRST GROUP OF SPECIES, and SPECIES I (i.e., Fig. 6) of the SECOND GROUP OF SPECIES in the replies filed on 11 January 2008 and 03 March 2008 is acknowledged.

Applicant has listed all of claims 1-26 as being readable upon both elected SPECIES I (i.e., Fig. 1) of the FIRST GROUP OF SPECIES and elected SPECIES I (i.e., Fig. 6) of the SECOND GROUP OF SPECIES.

The examiner disagrees that all of claims 1-26 read on the elected SPECIES I (i.e., Fig. 1) of the FIRST GROUP OF SPECIES and elected SPECIES I (i.e., Fig. 6) of the SECOND GROUP OF SPECIES.

More particularly, claim 9 recites that "the distribution duct is arranged in an upper part of the wall structure and the collector duct is arranged in a lower part of the wall structure" and this clearly does not read on elected SPECIES I (i.e., Fig. 6) of the SECOND GROUP OF SPECIES because the distribution duct "13" is in the floor and perhaps in the lower portion of the side wall "17" and the collector ducts "19" are in the upper part of side wall "17" and end wall "18".

Additionally, claim 26 does not read on elected SPECIES I (i.e., Fig. 6) of the SECOND GROUP OF SPECIES because no sensor is shown in Fig. 6. Rather, claim

26 which recites "a sensor" (i.e., measurement devices 340) clearly reads on SPECIES II (i.e., Fig. 12) of the SECOND GROUP OF SPECIES, not on elected SPECIES I of the SECOND GROUP OF SPECIES.

Claims 9 and 26 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected SPECIES, there being no allowable generic or linking claim. Election was made **without** traverse in the replies filed on 11 January 2008 and 03 March 2008.

### ***Priority***

Acknowledgment is made of applicant's claim for foreign priority based on applications FI20040420 and FI20030573 filed in Finland on 18 March 2004 and 15 April 2003, respectively.

However, it is noted that applicant has not filed a certified copy of Finnish Patent Application Nos. FI20040420 and FI20030573 as required by 35 U.S.C. 119(b).

### ***Information Disclosure Statement***

The information disclosure statements (IDSs) submitted on 28 June 2004, 09 August 2004, 07 September 2004, and 19 November 2004 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

However, Items AP (i.e., GB2128215 A), AR (i.e., JP62123240 A), AT (i.e., GB2260773 A), AV (i.e., EP0611407 A1), AW (i.e., JP08159533 A), and AZ (i.e.,

JP2000160719 A) in the Foreign Patent Documents section of the 28 June 2004 IDS have been lined through as not being considered by the examiner for failing to comply with 37 CFR 1.98(a)(2)(i) because a copy of each of the actual foreign patents has not been supplied to the examiner.

Items BB and BC in the Other Documents section of the 28 June 2004 IDS have been lined through as not being considered by the examiner for failing to comply with 37 CFR 1.98(b)(5) because there is no publication date listed as is required (i.e., the examiner notes that neither a copyright date nor a date taken off of the internet are a publication date and the examiner suggests Applicants go to either <http://archive.bibalex.org> or <http://www.archive.org/web/web.php> to establish the date of publication of items BB and BC on the internet).

Items BF (i.e., CH374815) and BG (i.e., DE2308498) in the Foreign Patent Documents section of the 09 August 2004 IDS have been lined through as not being considered by the examiner for failing to comply with 37 CFR 1.98(a)(3)(i) because there is no statement of relevance as to these foreign language documents (i.e., the examiner notes that on page 4 or 9 of the transmittal, Applicant checked box no. 7 as to concise explanation of Non-English language listed information items, but that no explanation was supplied and Applicant's statement on page 8 of 9 of the transmittal that "References BF and BG were received from counsel prosecuting foreign counterpart" is not sufficient to be considered a statement of relevance as not being a "Search Report").

Item BP (i.e., DT2520441 A1) in the Foreign Patent Documents section of the 19 November 2004 IDS has been lined through as not being considered by the examiner for failing to comply with 37 CFR 1.98(a)(3)(i) because there is no statement of relevance as to this foreign language document (i.e., the examiner notes that on page 4 or 9 of the transmittal, Applicant checked box no. 7 as to concise explanation of Non-English language listed information items and Box 7A as to EPO Search Report, but the document Applicant submitted as the "EPO Search Report" is not a search report, but is instead an "Invitation to Pay Additional Fees and in fact, in headnote 2 on the top of the fourth page entitled "Annex Form PCT/ISA/206" of the document, it specifically states that "[t]his communication is not the international search report . . .").

Item BR (i.e., "International Search Report") in the Other Documents section of the 19 November 2004 IDS has been lined through as not being considered by the examiner because the actual document is not an International Search Report, but is instead an "Invitation to Pay Additional Fees (i.e., in fact, in headnote 2 on the top of the fourth page entitled "Annex Form PCT/ISA/206" of the document, it specifically states that "[t]his communication is not the international search report . . .").

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the

(1) "structure of claim 1 further comprising: a distribution duct" as specifically recited in lines 1-2 of claim 3;

(2) "distribution duct is located at an edge of the structure and the collection duct is located at an edge of the structure opposite the distribution duct" as specifically recited in lines 4-5 of claim 7 (i.e., wherein the structure comprises the recitations in claim 1);

(3) "structure is at least part of a wall structure, and the distribution duct is arranged in a lower part of the wall structure and the collector duct is arranged in an upper part of the wall structure" as specifically recited in lines 1-3 of claim 8;

(4) "structure of claim 1 further comprising: a collector duct with at least one opening" as specifically recited in lines 1-2 of claim 10;

(5) "collection duct includes a plurality of openings with progressively changing sizes" as specifically recited in lines 1-2 of claim 13;

(6) "collection duct includes a plurality of openings, the openings ordered to be progressively closer to one another" as specifically recited in lines 1-2 of claim 14; and

(7) "structure according to claim 1, wherein the structure includes a wall and at least one of a floor and ceiling" as specifically recited in lines 1-2 of claim 17.

must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure



is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to because:

(1) Fig. 2, approximately near the two reference numerals "9" and "9" in the upper middle of the figure, there is an lead line with arrow at the end thereof which is not leading to a reference numeral and the examiner suggest the either the reference numeral --11-- should be inserted to represent the "air channel" or else the lead line deleted;

(2) Fig. 3, the three "arrows" in the figure should be labeled with a lead line leading to a reference numeral or character and explained in the specification;

(3) Fig. 6, the lead line leading from reference numeral "18" should not cross the arrow in collector duct 19;

(4) Fig. 9, the figure should not be enclosed within a "box"; and

(5) Fig. 10 is not understood because it is not clear if the plastic pipes are below the structure of concrete in which case they should be shown in dashed outline.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

Applicant is reminded of the proper language and format for an abstract of the disclosure.

**The abstract should be in narrative form** and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology

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often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc. (Emphasis added).

The abstract of the disclosure is objected to because:

(1) lines 4-9 are not in narrative form (i.e., short concise sentences), but rather are in claim form (i.e., one long run-on sentence).

Correction is required. See MPEP § 608.01(b).

The disclosure is objected to because of the following informalities:

(1) reference numeral "4" has been called "rigid surface sheet", "water resistant sheet" and "mineral board" throughout the specification and it is not clear that these are all the same structure;

(2) reference numeral "13" has been called "thermal or acoustic insulation" and "distribution duct" throughout the specification and it is not clear if this is the same structure;

(3) reference numeral "16" has been called "floor", "air-duct network", and "wall" throughout the specification and it is not clear if this is all the same structure.

Appropriate correction is required.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The "Method and" should be deleted from the title since the method has been restricted out and those claims canceled.

Further, since many examiners use the title of the invention for searching purposes, the examiner suggests that Applicants amend the title of the invention to one that is clearly indicative of the patentable feature of the invention. However, should Applicants choose not to amend the title of the invention, the examiner will amend the title of the invention at the time of allowance, if any (pursuant to the Manual of Patent Examining Procedure (MPEP) § 606.01, wherein it states that "[i]f a satisfactory title is not supplied by the applicant, the examiner may, at the time of allowance, change the title by examiner's amendment.").

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**Claims 3-8 and 10-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.**

**Claims 3-8 and 10-14** contain subject matter directed to the embodiment or species of the invention shown in Fig. 6 (i.e., distribution duct 13 and collection duct 19),

while claim 1 (on which claims 3-14 either directly or indirectly depend) contain subject matter directed to the embodiment or species of the invention shown in any of Figs. 1-5. However, the specification fails to describe how the embodiment or species of Fig. 6 is related to the embodiment or species of Figs. 1-5. Fig. 6 does not show the side wall, end wall, or floor thereof as being made up of a room-bounding structure comprised of a rigid sheet, a spacer protrusion extending from a first surface of the rigid sheet, and a rigid surface sheet contacting the spacer protrusion and forming an air channel between the first surface of the rigid sheet and the rigid surface sheet. Therefore, the application is not enabled for a distribution duct with at least one opening for introducing ventilation air to the structure recited in claim 1.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 1-8 and 10-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

**Claim 1**, line 6, the recitation of "the rigid sheet" is vague, indefinite, and confusing for lack of antecedent basis since it is not clear if this is referring back to the "rigid sheet" introduced in line 2 or the "rigid surface sheet" introduced in line 5.

**Claim 2**, lines 1-2, the recitation of "further comprising a plurality of spacer protrusions" is vague, indefinite, and confusing as lacking antecedent basis because it

is not clear if the spacer protrusion introduced in claim 1, line 3 is one of the plurality or if the plurality are in addition to the spacer protrusion introduced in claim 1, line 3.

**Claim 2**, line 2, the recitation of "the rigid sheet" is vague, indefinite, and confusing for lack of antecedent basis since it is not clear if this is referring back to the "rigid sheet" introduced in line 2 of claim 1 or the "rigid surface sheet" introduced in line 5 of claim 1.

**Claims 3-8**, the recitation of "distribution duct" is vague, indefinite, and confusing as it is not understood how the distribution duct relates to the rigid sheet having a spacer protrusion in contact with a rigid surface sheet to form an air channel recited in claim 1.

**Claims 7, 8, and 10-14**, the recitation of "collector duct" is vague, indefinite, and confusing as it is not understood how the distribution duct relates to the rigid sheet having a spacer protrusion in contact with a rigid surface sheet to form an air channel recited in claim 1.

**Claim 15**, line 2, the recitation of "mineral board" is vague, indefinite, and confusing as lacking antecedent basis because it is not clear if this is referring back to the "rigid surface sheet" introduced in line 5 of claim 1 or is in addition thereto.

**Claim 16**, line 2, the recitation of "a coated steel plate" is vague, indefinite, and confusing as lacking antecedent basis because it is not clear if this is referring back to the "rigid surface sheet" introduced in line 5 of claim 1 or is in addition thereto.

**Claim 17**, lines 1-2, the recitation that "the structure includes a wall and at least one of a floor and ceiling" is vague, indefinite, and confusing as not being understood. It

is not clear how the structure recited in claim 1 includes or comprises a wall or a floor or a ceiling. Is Applicant trying to claim that the structure recited in claim 1 is part of a wall which is attached to a floor or a ceiling?

**Claim 18**, lines 2-4, the recitation of "a spacer protrusion on a second surface of the rigid sheet, wherein contact between the spacer protrusion and another rigid surface sheet forms an air channel on the second surface side of the rigid sheet" is vague, indefinite, and confusing as not being clear. Reference numeral 3 has been disclosed in the specification as representing a "spacer protrusion". Reference numeral "7" has been disclosed in the specification as representing an "end flange". Applicant cannot use the same terminology for different structures and cannot call the structure represented by reference numeral "7" a spacer protrusion in the claims when that structure has not been represented as such in the specification.

Additionally, the recitation of "the spacer protrusion" in line 3 of claim 7 lacks antecedent basis because it is not clear if this is referring to the spacer protrusion introduced in line 3 of claim 1 or the spacer protrusion introduced in line 1 of claim 18.

Further, line 4, the recitation of "the rigid sheet" is vague, indefinite, and confusing for lack of antecedent basis since it is not clear if this is referring back to the "rigid sheet" introduced in line 2 of claim 1 or the "rigid surface sheet" introduced in line 5 of claim 1 or the "another rigid surface sheet" introduced in line 3 of claim 18.

**Claim 21**, lines 1-2, the recitation of "a plurality of spacer protrusions on the second surface distributed over the area of the rigid sheet" is vague, indefinite, and confusing as lacking antecedent basis since it is not clear if the spacer protrusion

introduced in line 2 of claim 18 is one of the plurality or if the plurality is in addition to the one introduced in line 2 of claim 18.

Additionally, it is not seen how the two edge flanges (7, 7) at the ends of the rigid sheet (1) are "distributed over the area of the rigid sheet"?

Further, line 2, the recitation of "the rigid sheet" is vague, indefinite, and confusing for lack of antecedent basis since it is not clear if this is referring back to the "rigid sheet" introduced in line 2 of claim 1 or the "rigid surface sheet" introduced in line 5 of claim 1 or the "another rigid surface sheet" introduced in line 3 of claim 18.

**Claim 22**, line 2, the recitation of "mineral board" is vague, indefinite, and confusing as lacking antecedent basis because it is not clear if this is referring back to the "another rigid surface sheet" introduced in line 3 of claim 18 or is in addition thereto.

**Claim 23**, line 2, the recitation of "a sheet that is at least part organic building board" is vague, indefinite, and confusing as lacking antecedent basis because it is not clear if this is referring back to the "another rigid surface sheet" introduced in line 3 of claim 18 or is in addition thereto.

**Claim 24**, line 2, the recitation of "a coated steel plate" is vague, indefinite, and confusing as lacking antecedent basis because it is not clear if this is referring back to the "another rigid surface sheet" introduced in line 3 of claim 18 or is in addition thereto.

**Claim 25**, line 2, the recitation of "the rigid sheet" is vague, indefinite, and confusing for lack of antecedent basis since it is not clear if this is referring back to the



"rigid sheet" introduced in line 2 of claim 1 or the "rigid surface sheet" introduced in line 5 of claim 1 or the "another rigid surface sheet" introduced in line 3 of claim 18.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1, 2, 17-21, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by JEFFERS ET AL. (U.S. Patent No. 6,158,178).**

**As to claim 1** (and as best understood despite the 35 U.S.C. § 112, second paragraph, indefiniteness discussed above), JEFFERS ET AL. disclose a room-bounding structure comprising:

a rigid sheet (22 in Figs. 8A and 8B or 22a in Fig. 17 and 18), which is substantially impermeable to moisture (metal sheet 22 or 22a – see col. 5, line 42 and thin-line diagonal cross-hatching representing metal according to drawing symbols); and

a spacer protrusion (30) extending from a first surface (24) of the rigid sheet (22 or 22a), the protrusion (30) being rigidly formed from the rigid sheet (22 or 22a), wherein contact between the spacer protrusion (30) and a rigid surface sheet (90) forms an air channel on the first surface (24) side of the rigid sheet (22 or 22a) "for ventilating air through the structure" (the structure of JEFFERS ET AL. is capable of performing the intend use within quotation marks).

**As to claim 2** (and as best understood despite the 35 U.S.C. § 112, second paragraph, indefiniteness discussed above), JEFFERS ET AL. disclose the structure of claim 1 as discussed above, and JEFFERS ET AL. also disclose a plurality of spacer protrusions (30, 30) distributed over the area of the rigid sheet (22 or 22a).

**As to claim 17** (and as best understood despite the 35 U.S.C. § 112, second paragraph, indefiniteness discussed above), JEFFERS ET AL. disclose the structure of claim 1 as discussed above, and JEFFERS ET AL. also disclose that the structure includes a wall and at least one of a floor and ceiling (JEFFERS ET AL. disclose that his partition wall system is meant to be used in an office building environment and therefore, it is clear his wall system is meant to extend between a floor and a ceiling).

**As to claim 18** (and as best understood despite the 35 U.S.C. § 112, second paragraph, indefiniteness discussed above), JEFFERS ET AL. disclose the structure of claim 1 as discussed above, and JEFFERS ET AL. also disclose a spacer protrusion (unnumbered edge flange connected to 22 in Figs. 8A and 8B or 32 and 44) on a second surface of the rigid sheet (22 or 22a), wherein contact between the spacer protrusion (unnumbered edge flange connected to 22 in Figs. 8A and 8B or 32 and 44) and another rigid surface sheet (90) forms an air channel on the second surface side of the rigid sheet (22 or 22a).

**As to claim 19** (and as best understood despite the 35 U.S.C. § 112, second paragraph, indefiniteness discussed above), JEFFERS ET AL. discloses the structure of claim 18 as discussed above, and JEFFERS ET AL. also disclose that the spacer

protrusion (unnumbered edge flange connected to 22 in Figs. 8A and 8B or 32 and 44) on the second surface is rigidly formed from the rigid sheet (22 or 22a).

**As to claim 20** (and as best understood despite the 35 U.S.C. § 112, second paragraph, indefiniteness discussed above), JEFFERS ET AL. disclose the structure of claim 18 as discussed above, and JEFFERS ET AL. also disclose that the spacer protrusion (unnumbered edge flange connected to 22 in Figs. 8A and 8B or 44) on the second surface is an edge flange (unnumbered edge flange connected to 22 in Figs. 8A and 8B or 44) bent into the edge of the another rigid surface sheet (90).

The examiner notes that "bent" is a process limitation so that the recitation that the edge flange is "bent" is considered to be product-by-process and in product-by-process claiming it is the product that forms the patentable part of the invention.

**As to claim 21** (and as best understood despite the 35 U.S.C. § 112, second paragraph, indefiniteness discussed above), JEFFERS ET AL. disclose the structure of claim 18 as discussed above, and JEFFERS ET AL. also disclose a plurality of spacer protrusions (unnumbered edge flange connected to 22 in Figs. 8A and 8B or 32 and 44) on the second surface distributed over the area of the rigid sheet (22 or 22a).

**As to claim 25** (and as best understood despite the 35 U.S.C. § 112, second paragraph, indefiniteness discussed above), JEFFERS ET AL. disclose the structure of claim 1 as discussed above, and JEFFERS ET AL. also disclose an attachment flange (left and right flange bent down from 24 in Fig. 8B) connected to an edge of the rigid sheet (24), and "configured to attach to an adjacent structure to form a rigid unified

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structure" (the structure of JEFFERS ET AL. is capable of performing the recited intended use within quotation marks).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 3-8 and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over JEFFERS ET AL. (U.S. Patent No. 6,189,270) in view of PALMER ET AL. (U.S. Patent No. 5,746,653).**

**As to claim 3** (and as best understood despite the 35 U.S.C. § 112, first and second paragraph, lack of enablement and indefiniteness, respectively, discussed above), JEFFERS ET AL. disclose the structure of claim 1 as discussed above.

JEFFERS ET AL. fail to explicitly disclose a distribution duct with at least one opening for introducing ventilating air to the structure.

PALMER ET AL. discloses a room-bounding structure including apparatus that can distribute and collect air which includes a distribution duct (20a or 20b in Fig. 4) with at least one opening (see hole pattern 21a or 21b) "for introducing ventilating air to the structure" (the structure of PALMER ET AL. is capable of performing the recited intended use within quotation marks).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the structure of JEFFERS ET AL. by including a distribution duct with at least one opening as taught by PALMER ET AL. in order to easily distribute ventilating air to the structure.

**As to claim 4** (and as best understood despite the 35 U.S.C. § 112, first and second paragraph, lack of enablement and indefiniteness, respectively, discussed above), JEFFERS ET AL. in view of PALMER ET AL. disclose the structure of claim 3 as discussed above, and PALMER ET AL. also disclose that the distribution duct (20a or 20b in Fig. 4) introduces ventilating air from a dry interior space of a building.

**As to claim 5** (and as best understood despite the 35 U.S.C. § 112, first and second paragraph, lack of enablement and indefiniteness, respectively, discussed above), JEFFERS ET AL. in view of PALMER ET AL. disclose the structure of claim 3 as discussed above, and PALMER ET AL. also disclose that the distribution duct (20a or 20b) includes a plurality of openings (see hole pattern 21a or 21b which shows openings with progressively changing sizes) with progressively changing sizes "configured to minimize dead space in the air channel" (the structure of PALMER ET AL. is capable of performing the recited intended use within quotation marks).

**As to claim 6** (and as best understood despite the 35 U.S.C. § 112, first and second paragraph, lack of enablement and indefiniteness, respectively, discussed above), JEFFERS ET AL. in view of PALMER ET AL. disclose the structure of claim 3 as discussed above, and PALMER ET AL. also disclose that the distribution duct (20a or 20b) includes a plurality of openings (see hole pattern 21a or 21b which shows

openings which are progressively closer to one another), the openings ordered to be progressively closer to one another "to minimize dead space in the air channel" (the structure of PALMER ET AL. is capable of performing the recited intended use within quotation marks).

**As to claim 7** (and as best understood despite the 35 U.S.C. § 112, first and second paragraph, lack of enablement and indefiniteness, respectively, discussed above), JEFFERS ET AL. in view of PALMER ET AL. disclose the structure of claim 3 as discussed above, and PALMER ET AL. also disclose a collection duct (20 in Fig. 4) with at least one opening (see hole pattern 21) "for removing ventilating air from the structure" (the structure of PALMER ET AL. is capable of performing the recited intended use within quotation marks), wherein the distribution duct (20a or 20b) is located at an edge of the structure and the collection duct (20) is located at an edge of the structure opposite from the distribution duct (20a or 20b).

**As to claim 8** (and as best understood despite the 35 U.S.C. § 112, first and second paragraph, lack of enablement and indefiniteness, respectively, discussed above), JEFFERS ET AL. in view of PALMER ET AL. disclose the structure of claim 7 as discussed above, and PALMER ET AL. also disclose that the structure is at least part of a wall structure, and the distribution duct (20a or 20b) is arranged in a lower part of the wall structure and the collector duct (20) is arranged in an upper part of the wall structure.

**As to claim 10** (and as best understood despite the 35 U.S.C. § 112, first and second paragraph, lack of enablement and indefiniteness, respectively, discussed above), JEFFERS ET AL. disclose the structure of claim 1 as discussed above.

JEFFERS ET AL. fail to explicitly disclose a collector with at least one opening for removing ventilating air from the structure.

PALMER ET AL. disclose a collector duct (20) with at least one opening (see hole pattern 21) “for removing ventilating air from the structure” (the structure of PALMER ET AL. is capable of performing the recited intended use within quotation marks).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the structure of JEFFERS ET AL. by including a distribution duct with at least one opening as taught by PALMER ET AL. in order to easily distribute ventilating air to the structure.

**As to claim 11** (and as best understood despite the 35 U.S.C. § 112, first and second paragraph, lack of enablement and indefiniteness, respectively, discussed above), JEFFERS ET AL. in view of PALMER ET AL. disclose the structure of claim 10 as discussed above, and PALMER ET AL. also disclose that the collector duct (20) “removes ventilating air from the structure to a mechanical air extractor (fan 40 or 41)” (the structure of PALMER ET AL. is capable of performing the intended use within quotation marks).

**As to claim 12** (and as best understood despite the 35 U.S.C. § 112, first and second paragraph, lack of enablement and indefiniteness, respectively, discussed

above), JEFFERS ET AL. in view of PALMER ET AL. disclose the structure of claim 11 as discussed above, and PALMER ET AL. also disclose that the collector duct (20) “removes ventilating air from the structure to a mechanical air extractor (fan 40 or 41) that also ventilates air from a bathroom” (the structure of PALMER ET AL. is capable of performing the recited intended use within quotation marks).

**As to claim 13** (and as best understood despite the 35 U.S.C. § 112, first and second paragraph, lack of enablement and indefiniteness, respectively, discussed above), JEFFERS ET AL. in view of PALMER ET AL. disclose the structure of claim 10 as discussed above, and PALMER ET AL. also disclose that the collection duct (20) includes a plurality of openings (see hole pattern 21 which shows openings with progressively changing sizes) with progressively changing sizes “configured to minimize dead space in the air channel” (the structure of PALMER ET AL. is capable of performing the recited intended use within quotation marks).

**As to claim 14** (and as best understood despite the 35 U.S.C. § 112, first and second paragraph, lack of enablement and indefiniteness, respectively, discussed above), JEFFERS ET AL. in view of PALMER ET AL. disclose the structure of claim 10 as discussed above, and PALMER ET AL. also disclose that the collection duct (20) includes a plurality of openings (see hole pattern 21 which shows openings progressively closer to one another), the openings ordered to be progressively closer to one another “to minimize dead space in the air channel” (the structure of PALMER ET AL. is capable of performing the recited intended use within quotation marks).



**Claims 15, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over JEFFERS ET AL. (U.S. Patent No. 6,189,270) in view of either LONDON (U.S. Patent No. 2,039,601) or LEHR ET AL. (U.S. Patent No. 4,736,561).**

**As to claim 15** (and as best understood despite the 35 U.S.C. § 112, second paragraph, indefiniteness discussed above), JEFFERS ET AL. disclose the structure of claim 1 as discussed above.

JEFFERS ET AL. fail to explicitly disclose that the spacer protrusion is in contact with mineral board.

LONDON discloses a building construction having walls (B or F) and a ceiling (C) made of panels having spacer protrusions (11) which are in contact with mineral board (10, 14 - see page 2, lines 39-42 wherein it states plaster-board which is equivalent to mineral board)).

LEHR ET AL. disclose that it is well known in the art for using mineral board (6) in panels (16), wherein the mineral board serves as the outer facing of the panel and is contact with spacer protrusions (8).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the structure of JEFFERS ET AL. by making the outer skin (90) thereof be mineral board as taught by either LONDON or LEHR ET AL. in order to provide a serviceable, inexpensive, water-resistant facing material for the panel.

**As to claim 22** (and as best understood despite the 35 U.S.C. § 112, second paragraph, indefiniteness discussed above), JEFFERS ET AL. disclose the structure of claim 18 as discussed above.

JEFFERS ET AL. fail to explicitly disclose that the spacer protrusion on the second surface is in contact with mineral board.

LONDON discloses a building construction having walls (B or F) and a ceiling (C) made of panels having spacer protrusions (11) which are in contact with mineral board (10, 14 - see page 2, lines 39-42 wherein it states plaster-board which is equivalent to mineral board)).

LEHR ET AL. disclose that it is well known in the art for using mineral board (6) in panels (16), wherein the mineral board serves as the outer facing of the panel and is contact with spacer protrusions (8).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the structure of JEFFERS ET AL. by making the outer skin (90) thereof be mineral board as taught by either LONDON or LEHR ET AL. in order to provide a serviceable, inexpensive, water-resistant facing material for the panel.

**As to claim 23** (and as best understood despite the 35 U.S.C. § 112, second paragraph, indefiniteness discussed above), JEFFERS ET AL. disclose the structure of claim 18 as discussed above.

JEFFERS ET AL. fail to explicitly disclose that the spacer protrusion on the second surface is in contact with a sheet that is at least part organic building board.

LONDON discloses a building construction having walls (B or F) and a ceiling (C) made of panels having spacer protrusions (11) which are in contact with mineral board (10, 14 - see page 2, lines 39-42 wherein it states plaster-board, which is equivalent to mineral board, and is at least part organic building board).

LEHR ET AL. disclose that it is well known in the art for using mineral board (6, which is at least part organic) in panels (16), wherein the mineral board serves as the outer facing of the panel and is contact with spacer protrusions (8).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the structure of JEFFERS ET AL. by making the outer skin (90) thereof be at least part organic building board as taught by either LONDON or LEHR ET AL. in order to provide a serviceable, inexpensive, water-resistant facing material for the panel.

**Claims 16 and 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over JEFFERS ET AL. (U.S. Patent No. 6,189,270) in view of either ISHIKAWA ET AL. (U.S. Patent No. 5,678,369) or MARANGONI ET AL. (U.S. Patent No. 6,446,396).**

**As to claim 16** (and as best understood despite the 35 U.S.C. § 112, second paragraph, indefiniteness discussed above), JEFFERS ET AL. disclose the structure of claim 1 as discussed above.

JEFFERS ET AL. fail to explicitly disclose that the spacer protrusion is in contact with a coated steel plate.

Either ISHIKAWA ET AL. or MARANGONI ET AL. disclose that it is well known in the art to face a panel with a coated steel plate (surfacing materials 2, 14 in Fig. 1 and as noted at col. 9, line 66 through col. 10, line 4 of ISHIKAWA ET AL.; 96' in Fig. 9 and as noted col. 7, lines 58-61 in MARANGONI ET AL.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the structure of JEFFERS ET AL. by making the outer skin (90) thereof be coated steel plate as taught by either ISHIKAWA ET AL. or MARANGONI ET AL. in order to provide a serviceable, inexpensive, water-resistant facing material for the panel.

**As to claim 24** (and as best understood despite the 35 U.S.C. § 112, second paragraph, indefiniteness discussed above), JEFFERS ET AL. disclose the structure of claim 18 as discussed above.

JEFFERS ET AL. fail to explicitly disclose that the spacer protrusion on the second surface is in contact with a coated steel plate.

Either ISHIKAWA ET AL. or MARANGONI ET AL. disclose that it is well known in the art to face a panel with a coated steel plate (surfacing materials 2, 14 in Fig. 1 and as noted at col. 9, line 66 through col. 10, line 4 of ISHIKAWA ET AL.; 96' in Fig. 9 and as noted col. 7, lines 58-61 in MARANGONI ET AL.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the structure of JEFFERS ET AL. by making the outer skin (90) thereof be coated steel plate as taught by either ISHIKAWA ET AL. or

MARANGONI ET AL. in order to provide a serviceable, inexpensive, water-resistant facing material for the panel.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gay Ann Spahn whose telephone number is (571)-272-7731. The examiner can normally be reached on Monday through Friday, 10:30 am to 7:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard E. Chilcot can be reached on (571)-272-6777. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gay Ann Spahn/  
Gay Ann Spahn, Primary Examiner  
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